

Newsletter



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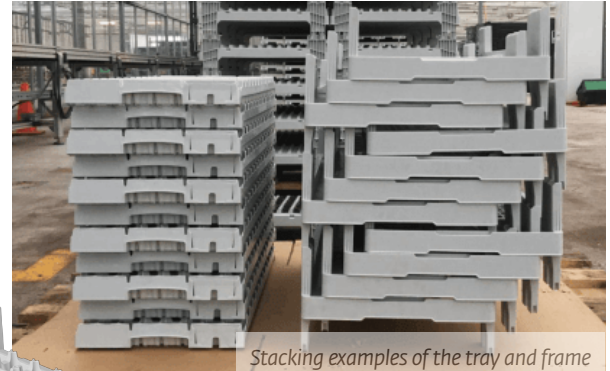
Xcarrier for Syngenta Flowers

Twenty years ago, BPO assisted Syngenta Flowers with the development of their current reusable plant carrier: the Xtray. This was a big system change. The returnable Xtray replaced the single use polystyrene trays at the time. However, until recently they still used a disposable polystyrene tray for certain purposes.

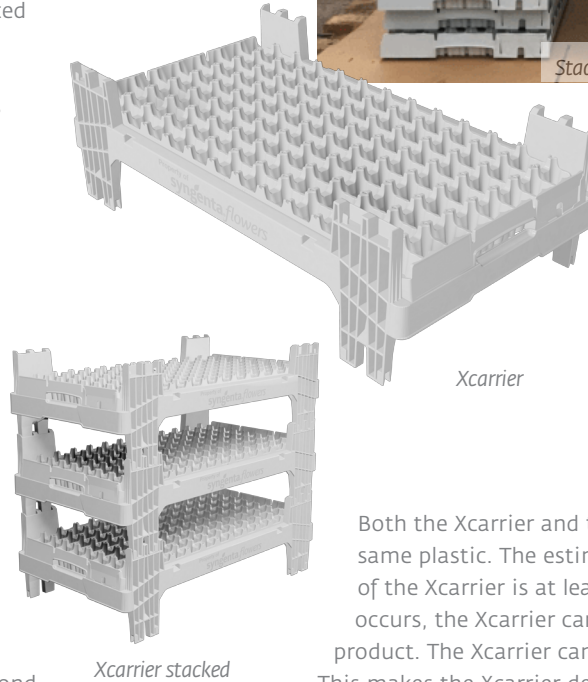
Syngenta Flowers now wanted to completely get rid of the disposable trays. This would require a totally new system. After years of experience with the product, they had a set of functional and technical requirements for the system they wanted. The new plant carrier should exist of two parts: a tray for the plant production and a separate frame for transport. The tray should be close to the ground, to easily water the growing plants from below. It should also have less spacing in between when placed in a grid and be reusable. During transport the tray will be placed in a frame. This frame should give the plants enough room in height for the plant and its delicate leaves.

BPO developed the product from the first idea to the Xcarrier. The first part is the tray, which contains 104 pockets and holds the young plants. The tray is designed to be handled easily by one hand and can be placed on the carrier from both short sides. After use, the trays are cleaned up in an automated line and ready for another batch of plants. An empty tray can be efficiently stacked on a pallet for transport. The second part is the carrier. The carrier is compatible in stacking with the current Xtray, but also nests compactly for transport. The carrier holds the trays with plants during transport to keep them safe.

During handling, stacking and transport, the Xcarrier will experience some critical loads. Using FEM-simulations on different concepts, BPO was able to choose the best product geometry to withstand these. Especially the stiffness of the frame is important for a good function of the system. In the Moldflow simulations, special attention has been given to the warpage. After injection molding the parts can deform due to shrinkage of the plastic.



Stacking examples of the tray and frame



Xcarrier

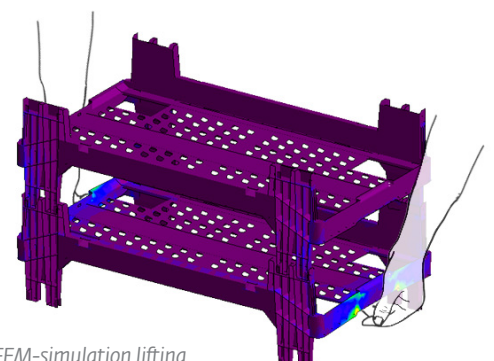
Xcarrier stacked

A big risk was that the feet of the frame would deform too much and could not be stacked straight anymore. In the moldflow optimization it has been made sure that the parts are straight and stay within the tolerances, so all parts fits and can be stacked nicely.

Both the Xcarrier and the Xtrays are made of the same plastic. The estimated lifespan of both parts of the Xcarrier is at least ten years. When a defect occurs, the Xcarrier can be recycled into the same product. The Xcarrier can also be made of old Xtrays. This makes the Xcarrier design a good example of a fully circular product.

Meanwhile the Xcarrier has been introduced successfully and a word wide patent has been granted to this system.

More information: www.syngentaflowers.com/xcarrier.



FEM-simulation lifting



Insert plant tray

2021

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Lock case for Koeriersdeur.nl

The Courier Door offers a solution for mounting a prefabricated aluminum door or flap with an (automatic) lock in flat walls of loading containers on trucks, vans and trailers.

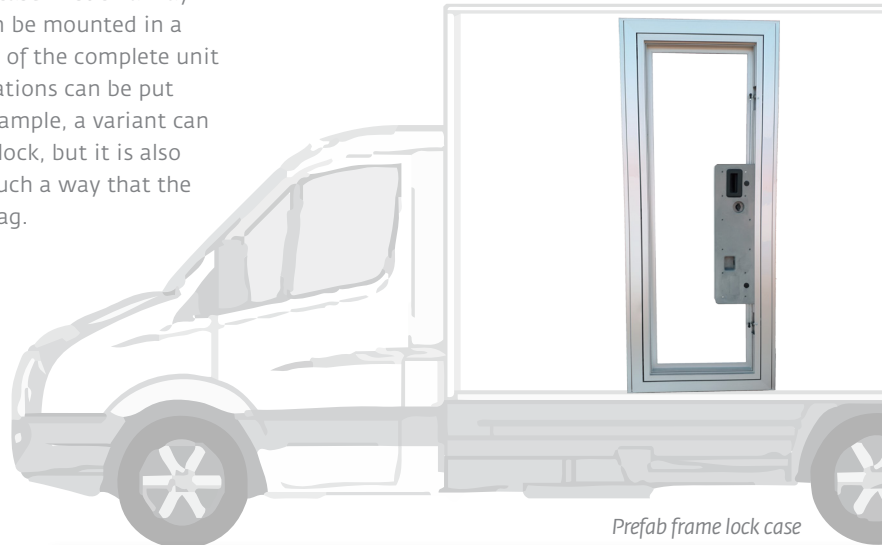
Because the locking system is complex, the idea was conceived to develop a lock case in which the various components can be pre-assembled to make sales, assembly and use easier.

BPO has developed the plastic lock case in such a way that the various operating parts can be mounted in a separate housing, making assembly of the complete unit easier and faster. Multiple configurations can be put together using the lock case. For example, a variant can be made with a simple mechanical lock, but it is also possible to set up the lock case in such a way that the couriers can open the door with a tag.

Opening the door with a tag is very useful for couriers. The door is opened with the tag on a wristband and automatically locks after removing the packages. In this way, the courier has his hands free

to carry packages, no one has access to the cargo hold during delivery and fewer actions are required per delivery.

Find more information at: www.koeriersdeur.nl



Prefab frame lock case

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VR goggles as a prototyping tool

The size and overall impression of a product can be easily lost when viewing a digital 3D-model on a screen. And while rapid prototyping offers a sense of scale and function, the production of the model can be expensive and details are less noticeable. Not mentioning the difficulty of creating an accurate material finish.

At BPO, a new prototyping tool is available: The virtual prototype. Using the VR-set available at the office, clients can view the digital design in the correct size, detailing and materials. You can pick it up and look at it from every angle or compare it with other designs in a heartbeat. This way, we can offer an extra service to make the design process as insightful as possible.



VR goggles to view product design

Meet us at the Fakuma 2021 fair!

After skipping a year, we can announce with enthusiasm that we will be present at the Fakuma fair again next fall! The 27th edition of the fair will take place from 12 to 16 October 2021 in Friedrichshafen, Germany. At our stand B3-3227 / Hall B3 we will show the latest developments within our company.



27th Fakuma 2021
12.-16. OCTOBER
FRIEDRICHSHAFEN

Do you want to make sure you get to speak to one of us? Mail in advance to info@bpo.nl to schedule an appointment.



BPO at Fakuma 2018